

From: [Angela Carpenter](#)
To: [Mel Hauptman](#)
Cc: [Denise Zeno](#)
Subject: Re: Fw: Cabo Rojo Vapor Intrusion Concerns
Date: 01/26/2012 03:25 PM

Just spoke to Joe about this earlier this afternoon. Nick is down there this week and is supposed to be scoping the schools for testing.

▼ Mel Hauptman---01/26/2012 03:24:09 PM----- Forwarded by Mel Hauptman/R2/USEPA/US on 01/26/2012 03:24 PM ----- From: Mel Hauptman/R2/USEPA

From: Mel Hauptman/R2/USEPA/US
To: Angela Carpenter/R2/USEPA/US@EPA
Date: 01/26/2012 03:24 PM
Subject: Fw: Cabo Rojo Vapor Intrusion Concerns

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From: Mel Hauptman/R2/USEPA/US
To: Joe Rotola/R2/USEPA/US@EPA
Date: 01/26/2012 03:14 PM
Subject: Fw: Cabo Rojo Vapor Intrusion Concerns

Joe, do you want Nick M to look into this???

----- Forwarded by Mel Hauptman/R2/USEPA/US on 01/26/2012 03:13 PM -----

From: Denise Zeno/R2/USEPA/US
To: Mel Hauptman/R2/USEPA/US@EPA
Date: 01/26/2012 03:07 PM
Subject: Fw: Cabo Rojo Vapor Intrusion Concerns

FYI

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-----Forwarded by Denise Zeno/R2/USEPA/US on 01/26/2012 03:07PM-----

To: Denise Zeno/R2/USEPA/US@EPA
From: "Dyken, Jill J. (ATSDR/DHAC/SRAB)" <azd9@cdc.gov>
Date: 01/26/2012 02:54PM

Cc: Elena Vaouli/R2/USEPA/US@EPA, "Hayes, Lisa (ATSDR/DHAC/SRAB)" <lih1@cdc.gov>
Subject: Cabo Rojo Vapor Intrusion Concerns

Hi Denise,

It was nice speaking with you on the telephone today. Thank you for sharing the draft report on sub-slab air sampling to assess soil gas VOC levels at potential source areas for the Cabo Rojo Ground Water site. As we discussed, we will be preparing a short letter health consultation on this topic in the next few days, but I want to share some of our preliminary concerns based on these data.

- The sub-slab air sample collected in the Head Start facility (next to a potential source area) showed 4,970 ppb PCE; 83 ppb TCE; and 50 ppb DCE. Indoor air concentrations are generally attenuated compared to sub-slab measurements, but a typical attenuation factor of 10 would suggest that VOCs could be as high as 497 ppb PCE; 8.3 ppb TCE, and 5 ppb DCE. For PCE, 497 ppb is greater than both chronic (40 ppb) and acute (200 ppb) minimal risk levels for neurological effects. It could also increase the risk of cancer, for children attending the program or for workers, to risks above the 10^{-4} level. A TCE concentration of 8.3 ppb may be a concern for cardiac birth defects or immunologic effects, based on the new RfC of 0.3 ppb. These considerations suggest that *harmful exposures to VOCs from vapor intrusion may be occurring at this facility. Assessing the actual concentrations of VOCs in the indoor air is essential* to determine the proper level of concern and prevent any further harmful exposures from occurring.

- I have spoken to a colleague experienced with vapor intrusion issues, and she strongly suggested that now is the time to collect the indoor air samples. Winter/rainy season typically has much higher vapor intrusion issues. Although heating/lack of ventilation may be less of a problem for winter in Puerto Rico, the greater rain infiltration during this time of year will tend to flush vapors up from the soil into the indoor air. Therefore, waiting until summer will not only result in extension of possibly harmful exposures, but may also give misleading findings for the extent of exposure. *The earlier the sampling can be performed, the better.*

- Although the concern is greatest for children at the Head Start facility, I also note that significantly higher VOC concentrations were found at other locations in the report. Exposures there to workers or building occupants may be of even greater concern.

I hope this information is helpful, and I look forward to working with you on this site!

Thanks,

Jill

Jill J. Dyken, PhD, PE

Environmental Health Scientist

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